



# UNITED STATES PATENT AND TRADEMARK OFFICE

*ck*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,988	12/06/2004	Dirk A. Heerding	P51361	1348
20462 7590 11/23/2007 SMITHKLINE BEECHAM CORPORATION CORPORATE INTELLECTUAL PROPERTY-US, UW2220 P. O. BOX 1539 KING OF PRUSSIA, PA 19406-0939			EXAMINER POWERS, FIONA	
			ART UNIT 1626	PAPER NUMBER
			NOTIFICATION DATE 11/23/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

US\_cipkop@gsk.com

**Office Action Summary**

Application No.

10/516,988

Applicant(s)

HEERDING, DIRK A.

Examiner

Fiona T. Powers

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 to 10, 14, 19, 20, 38 to 46 and 49 to 51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 to 10, 14, 19, 20, 38 to 46, 49 and 51 is/are allowed.
- 6) ☒ Claim(s) 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/6/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1626

Receipt is acknowledged of the information disclosure statement filed December 6, 2004 and the amendment filed October 17, 2007, which have been entered in the file.

Applicant's election without traverse of Group I, claims 1 to 10, 14, 16, 17, 19 to 24, 38 to 46 and 49 to 51 in the reply filed on October 17, 2007 is acknowledged.

Claim 50 is objected to because of the following informalities: the compound (E)-3-(4-amino-3-hydroxy-phenyl)-2-methyl-acrylic acid ethyl ester hydrochloride is listed twice in claim 50. Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

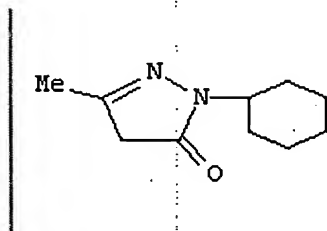
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 50 is rejected under 35 U.S.C. 102(b) as being anticipated by Schuster et al. (US 2132193) or Poot et al. (US 3728115), cited.

The references disclose the claimed intermediate 2-cyclohexyl-5-methyl-2,4-dihydro-pyrazol-3-one which can also be named 1-cyclohexyl-3-methyl-5-pyrazolone. Note Example 3 of

Art Unit: 1626

Schuster et al. and Compound No. 4 of Table I in columns 3 and 4 of Poot et al. It has the following structure:



The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima et al. (US 4948900), cited by applicant.

Determination of the scope and content of the prior art (MPEP §2141.01)

The reference generically discloses the claimed intermediate compound 5-(4-amino-3-hydroxy-benzylidene)-thiazolidine-2,4-dione. This compound is useful as an intermediate for pharmaceuticals. Note Formula III in column 3, lines 5 to 15 and claim 1 where the dotted line represents a double bond. The reference also discloses a method for the preparation of 5-(4-amino-3-hydroxy-benzylidene)-thiazolidine-

Art Unit: 1626

2,4-dione and the nitro analog 5-(3-hydroxy-4-nitro-benzylidene)-thiazolidine-2,4-dione by condensing 3-hydroxy-4-nitrobenzaldehyde with 2,4-dioxothiazolidine in the presence of a base and then treating the product with a reducing agent.

Note column 6, lines 45 to 54.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the prior art and the claims is that the reference generically discloses 5-(4-amino-3-hydroxy-benzylidene)-thiazolidine-2,4-dione and the nitro analog 5-(3-hydroxy-4-nitro-benzylidene)-thiazolidine-2,4-dione instead of specifically disclosing the compounds.

Finding of prima facie obviousness---rational and motivation (MPEP §2142-2413)

However, "there is nothing unobvious in choosing "some" among "many" indiscriminately". See In re Lemin, 141 USPQ 814. One of ordinary skill in the art would have been motivated to prepare 5-(4-amino-3-hydroxy-benzylidene)-thiazolidine-2,4-dione and 5-(3-hydroxy-4-nitro-benzylidene)-thiazolidine-2,4-dione with the expectation that additional compounds useful for the preparation of pharmaceuticals would be obtained.

Claims 1 to 10, 14, 19, 20, 38 to 46, 49 and 51 are allowed.

The claimed compounds of the formula (I) are not anticipated or rendered obvious by the prior art of record. The closest prior art compounds are disclosed in WO 01/89457. The

Art Unit: 1626

claimed compounds differ from the compounds disclosed in the reference in that the group that corresponds to Y is an aromatic group in the reference compounds and is non-aromatic in the claimed compounds.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fiona T. Powers whose telephone number is 571-272-0702. The examiner can normally be reached on Monday - Friday 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Fiona T. Powers*  
Fiona T. Powers  
Primary Examiner  
Art Unit 1626

ftp

November 14, 2007